



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Michael R. VIOLANTE et al.

Appl. No.: 10/647,119

Filed: August 25, 2003

For: ECHOGENIC COATINGS WITH
OVERCOAT

Art Unit: 3737

Examiner: Unassigned

Atty. Docket No.: 32286-192289

Customer No.:

26694

Information Disclosure Statement

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In accordance with the duty of disclosure under 37 CFR § 1.56, Applicants hereby notify the U.S. Patent and Trademark Office of the documents that are listed on the attached PTO/SB/08A. References on sheets 1-4 of the PTO/SB/08A form are of record in parent Application No. 09/366,193 where copies may be obtained in accordance with customary PTO practice. One copy of each of the references on sheets 5-6 of the PTO/SB/08A form is attached. Applicants request that these documents be considered and listed on the face of any patent granted in this application.

Date:

11/20/03

Respectfully submitted,

Michael A. Gollin

Registration No. 31,957

VENABLE LLP

P.O. Box 34385

Washington, D.C. 20043-9998

Telephone: (202) 962-4800

Telefax: (202) 962-8300

Please type a plus sign (+) inside this box



PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

Complete if Known

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 6

Application Number	10/647,119
Filing Date	August 25, 2003
First Named Inventor	Michael R. VIOLANTE et al.
Group Art Unit	3737
Examiner Name	Unassigned
Attorney Docket Number	32286-192289

U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Sub-Class	Filing Date
	3,695,921	10/3/72	SHEPHERD, et al.			
	4,100,309	7/11/78	MICKLUS, et al.			
	4,345,602	8/24/82	YOSHIMURA, et al.			
	4,373,009	2/8/83	WINN			
	4,401,124	8/30/83	GUESS, et al.			
	4,456,017	6/26/84	MILES			
	4,459,317	7/10/84	LAMBERT			
	4,585,666	4/29/86	LAMBERT			
	4,589,873	5/20/86	SCHWARTZ			
	4,642,267	2/10/87	CREASY, et al.			
	4,682,607	7/28/87	VAILLANCOURT			
	4,721,117	1/26/88	MAR, et al.			
	4,729,914	3/8/88	KLIMENT, et al.			
	4,739,768	4/26/88	ENGELSON			
	4,769,013	9/6/88	LORENZ, et al.			
	4,835,003	5/30/89	BECKER			
	4,841,976	6/27/89	PACKARD, et al.			
	4,867,174	9/19/89	SKRIBISKI			
	4,884,579	12/5/89	ENGELSON			
	4,950,257	8/21/90	HIBBS, et al.			
	4,991,602	2/12/91	AMPLATZ, et			
	5,041,100	8/20/91	ROWLAND, et al.			
	5,061,254	10/29/91	KARAKELLE, et al.			
	5,069,226	12/3/91	YAMAUCHI, et al.			

Examiner

Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

Please type a plus sign (+) inside this box → +

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 2 of 6

Complete if Known

Application Number	10/647,119
Filing Date	August 25, 2003
First Named Inventor	Michael R. VIOLANTE et al.
Group Art Unit	3737
Examiner Name	Unassigned
Attorney Docket Number	32286-192289

U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Sub-Class	Filing Date
	5,201,314	4/13/93	BOSLEY, et al.			
	5,331,027	7/19/94	WHITBOURNE			
	5,452,726	9/26/95	BURMEISTER, et al.			
	5,370,901	12/94	TOURNIER et al.			
	5,580,575	12/96	UNGER et al.			
	5,853,745	12/29/98	DAROUICHE			
	5,824,048	10/20/98	TUCH			
	5,120,770	06/09/1992	DOYLE et al.			
	6,106,473	08/22/2000	VIOLANTE et al.			
	3,605,750	09/1971	SHERIDAN et al.			
	4,111,190	09/1978	PLUMRIDGE			
	4,276,885	07/1981	TICKNER et al.			
	4,277,367	07/1981	MADSEN et al.			
	4,322,164	03/1982	SHAW et al.			
	4,386,612	06/1983	RODER et al.			
	4,490,139	12/1984	HUIZENGA et al.			
	4,567,896	02/1986	BARNEA et al.			

FOREIGN PATENT DOCUMENTS

Document Number	Date	Name	Class	Sub-Class	Translation
04070965 A1	10/7/90	EPO			
90/03768	4/19/90	WIPO			

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	Current Problems in Diagnostic Radiology, Percutaneous Transluminal Angioplasty, Charles J. Tegtmeier, Vol. XVI, No. 2, March/April 1987
	McGraw-Hill Encyclopedia of Science & Technology, 6 th Edition, (1987) C.R. Martinson, et al.; Surface Coating, Vol. 18, p. 7
	Interpenetrating Polymer Networks, Daniel Klempner, (1978)
	Endovascular Surgery, Wesley S. Moore, M.D., et al. (1989 W.B. Saunders Company), pp. 157-159

Examiner

Date Considered

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.

::ODMA\PCDOCS\DC2DOCS\1479858\1



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 3 of 6

Complete if Known

Application Number	10/647,119
Filing Date	August 25, 2003
First Named Inventor	Michael R. VIOLANTE et al.
Group Art Unit	3737
Examiner Name	Unassigned
Attorney Docket Number	32286-192289

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
		4,572,203		FEINSTEIN	02/1986	
		4,582,061		FRY	04/1986	
		4,681,119		RASOR et al.	07/1987	
		4,697,595		BREYER et al.	11/1987	
		4,709,703		LAZAROW et al.	12/1987	
		4,718,433		FEINSTEIN	01/1988	
		4,718,907		KARWOSKI et al.	01/1988	
		4,805,628		FRY et al.	03/1989	
		4,869,259		ELKINS	09/1989	
		4,872,922		BUNKER et al.	10/1989	
		4,911,172		BUI et al.	03/1990	
		5,048,530		HURWITZ	09/1991	
		5,054,310		FLYNN	10/1991	
		5,095,911		POMERANZ	03/1992	
		5,213,569		DAVIS	05/1993	
		5,219,335		WILLARD et al.	06/1993	
		5,221,269		MILLER et al.	06/1993	
		5,221,269		BOSLEY	06/1993	
		5,333,613		TICKNER et al.	08/1994	
		5,344,494		DAVIDSON et al.	09/1994	

FOREIGN PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM- DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ₆
		Office ³	Number ⁴	Kind Code ⁵ (if known)				
		WIPO	94/16739			08/1994		
		FR	2272633			12/1975		
		DE	3501355	A1		07/1985		

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 4 of 6

Complete if Known

Application Number	10/647,119
Filing Date	August 25, 2003
First Named Inventor	Michael R. VIOLANTE et al.
Group Art Unit	3737
Examiner Name	Unassigned
Attorney Docket Number	32286-192289

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Rompp Chemie Lexicon, Georg Thieme Verlag, Stuttgart, New York, 9. Auflage, 1992, Vol. 5 (Pi-S), pp. 4016 and 3575-3576. ("Schaumstoffe")	
		Rompp Chemie Lexicon, Georg Thieme Verlag, Stuttgart, New York, 9. Auflage, 1992, Vol. 6 (T-Z), p. 4688. ("Treibmittel")	
		M. R. VIOLANTE et al., "Particle Stabilized Bubbles For Enhanced Organ Ultrasound Imaging", Investigative Radiology, Vol. 26, Supp. I, November 1991, pp. S194-S197.	
		Barbara A. CARROLL et al., "Gelatin Encapsulated Nitrogen Micro-Bubbles as Ultrasound Contrast Agents", Investigative Radiology, Vol. 15, May-June 1980, pp. 260-266.	
		Jonathan OPHIR et al., "Contrast Agents for Diagnostic Ultrasound", Ultrasound Medicine and Biology, Vol. 15, No. 4, 1989, pp. 319-333.	
		K.J. PARKER, et al., "A Particular Contrast Agent With Potential For UltraSound Imaging Of Liver," UltraSound in Med. & Biology, Vol. 13, No. 9, March 1987, pp. 555-566	

U.S. PATENT DOCUMENTS

Examiner Initials *	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			
		5,383,466		PARTIKA	01/1995	
		5,409,688		QUAY	04/1995	
		5,454,373		KOGER et al.	10/1995	
		5,490,521		DAVIS et al.	02/1996	
		5,676,925		KLAVERNESS et al.	10/1997	
		5,690,908		DEUTSCH	11/1997	
		5,120,770		DOYLE et al.	06/09/1992	

Examiner Signature

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

VENABLE
 ATTORNEYS AT LAW



Approved for use through 10/31/2002. OMB 0651-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 5 of 6

Complete if Known

Application Number	10/647,119
Filing Date	August 25, 2003
First Named Inventor	Michael R. VIOLANTE et al.
Group Art Unit	3737
Examiner Name	Unassigned
Attorney Docket Number	32286-192289

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Diane BERGIN et al., "Echogenic Polymer Coating: Does It Improve Needle Visualization in Sonographically Guided Biopsy?", AJR: 178, May: 2002. pp. 1188-1190,	
		Ronald H. GOTTLIEB, et al., "Coating Agent Permits Improved Visualization of Biopsy Needles During Sonography", AJR 171, November: 1998. pp. 1301-1302.	
		William C. CULP, et al., "Relative Ultrasonographic Echogenicity of Standard, Dimpled, and Polymeric-coated Needles", JVIR, Volume 11, March 2000, pp. 351-358.	
		Ronald H. GOTTLIEB et al., "ECHO-COAT™ Coating Agent Permits Improved Visualization of Biopsy Needles", Radiological Society of North America, Chicago, IL. December 2: 1997, pp. 1-6.	
		M. VIOLANTE et al., "Enhanced Ultrasound Visibility of Medical Devices", Society for Biomaterials, San Diego, CA. April 22-25, 1998.	
		M. R. VIOLANTE, "Improving Needle Ultrasound Visibility", Transactions of the Society for Biomaterials April 28-May 2: 1999.	
		Lisa A., CARDON et al., "Novel Polymer Coating Improves Needle Visualization", Abstract Presented at the American Heart Association 71st Scientific Session: 1998.	
		William C. CULP et al., "A New Echogenic Needle Coating to Aid Ultrasonographic Guidance", Abstract Presented at SCVIR 24th Annual Scientific Meeting: 1999.	
		W.R. LEES et al., "Trials Of A New Reflective Coating For Ultrasound Needles, Catheters And Guidewires", Abstract Presented at the 85th Scientific Assembly and Annual Meeting Radiological Society of North America: 1999.	
		John ZIMMERMAN et al., "Structural and Chemical Analysis of Coating Used to Enhance Ultrasonic Imaging", Presented at the Sixth World Biomaterials Congress, May: 2000.	
		STS Bio Polymers, Inc., Press Release, "ECHO-COAT® Ultrasound Coating Now Available On Guidewire Introducer And Co-Axial Introducer Needles", December 12, 2002.	
		STS Bio Polymers, Inc., Press Release, "Echo-Coat Ultrasound Coating Now Available On A Core Biopsy Needle", January 24, 2002.	
		STS Bio Polymers, Inc., Press Release, "STS Biopolymers Wins Gold Award for ECHO-COAT® Ultrasound Needles", June 25, 2001.	
		STS Bio Polymers, Inc., Press Release, "STS Biopolymers Wins Medical Design Excellence Award for ECHO-COAT® Ultrasound Needles", May 15, 2001.	
		STS Bio Polymers, Inc., Press Release, "Enhanced Needle Visualization For Breast Localizations Under Ultrasound Guidance", May 15, 2001.	

Examiner
Signature

Date
Considered

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 6 of 6

Complete if Known

Application Number	10/647,119
Filing Date	August 25, 2003
First Named Inventor	Michael R. VIOLANTE et al.
Group Art Unit	3737
Examiner Name	Unassigned
Attorney Docket Number	32286-192289

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS

Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		STS Bio Polymers, Inc., Press Release, "Echogenic Coatings Patent Granted to STS Biopolymers", September 13, 2000.	
		STS Bio Polymers, Inc., Press Release, "STS Biopolymers Launches ECHO-COAT™ Ultrasound Biopsy Needles" February 24, 2000.	
		STS Bio Polymers, Inc., Press Release, "STS Biopolymers Receive FDA 510(k) Clearance for ECHO-COAT™ Ultrasound Needles", March 17, 1999.	
		STS Bio Polymers, Inc., Press Release, "Novel Polymer Coating Improves Visibility of Devices in Ultrasound Images", November 16, 1998.	
		STS Bio Polymers, Inc., Press Release, "Advance in Ultrasound Imaging", February 24, 1998.	
		STS Bio Polymers, Inc., Press Release, "Workshop L – Improving Needle Ultrasound Visibility", RSNA 1997.	

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.